37505.0206

REGEIVED CENTRAL FAX CENTER MAY 1 & 2007

In the Claims:

- 1. (Currently Amended) An electrochemical cell, which comprises:
 - a) a casing comprising a curved wall extending to an opening closed by a lid;
 - b) an anode a negative electrode comprising a plurality of anode face portions joined by anode connecting portions, wherein the anode face portions comprise an anode current collector supporting lithium and at least one of the anode connecting portions support a negative electrode active material of an alkali metal:
 - c) a cathode positive electrode comprising a plurality of cathode face portions joined by cathode connecting portions, wherein the cathode face portions and at least one of the cathode connecting portions support comprise a cathode current collector supporting a cathode active material which intercalates with lithium the alkali metal, and wherein the negative electrode and positive electrode are electrode assembly in the casing such that a periphery of the anode and cathode face portions substantially follows a contour of the curved wall of the casing;
 - d) a separator disposed between the <u>anode</u> negative

 electrode and the cathode as an electrode assembly

 housed in the casing with a periphery of the anode
 and cathode portions substantially following a

- contour of the curved wall of the casing positive electrode; and
- e) an electrolyte solution activating the <u>electrode</u> assembly; negative and positive electrodes
- f) wherein the cell has either:
 - i) a first cathode portion disposed intermediate
 first and second anode portions and wherein a
 combined capacity of a first and second anode
 faces of the respective first and second anode
 portions facing opposite sides of the first
 cathode portion is greater than a capacity of
 the first cathode portion, or
 - ii) a first anode portion disposed intermediate
 first and second cathode portions and wherein a
 combined capacity of a first and second cathode
 faces of the respective first and second cathode
 portions facing opposite sides of the first
 anode portion is greater than a capacity of the
 first anode portion.
- (Currently Amended) The electrochemical cell of claim 1
 wherein the anode and cathode electrodes are unitary members.
- 3. (Withdrawn) The electrochemical cell of claim 1 wherein one of the anode and the cathode electrodes is provided in two sections and the other electrode is a unitary member and a first one of the sections is aligned with a first side of the other electrode and a second one of the sections is aligned with a second side of the other electrode.

- (Currently Amended) The electrochemical cell of claim 1 wherein the anode and cathode face portions have at least one side formed in the shape of a curved surface.
- 5. (Currently Amended) The electrochemical cell of claim 1 wherein the anode and cathode face portions comprising the negative and positive electrodes decrease in size from those disposed in a middle position of the electrode assembly to an outer position thereof.
- 6. (Currently Amended) The electrochemical cell of claim 1 wherein the anode and cathode connecting portions increase in length from a first end of the respective anode and cathode electrodes to an opposite end thereof.
- 7. (Currently Amended) The electrochemical cell of claim 1 wherein the negative and positive electrodes anode and the cathode are wound to form the electrode assembly.
- 8. (Currently Amended) The electrochemical cell of claim 1 wherein there if the cell is in a case-negative design, there is either one more anode face portion than cathode face portions or if the cell is in a case-positive design, there is one more cathode face portion than anode face portions and the cell is either in a case negative or a case positive design, respectively.
- 9. The electrochemical cell of claim 1 wherein (Withdrawn) there is an equal number of cathode face portions and anode face portions and the cell is in either a case-positive or a case-negative design.

37505.0206

6 -

- 10. (Original) The electrochemical cell of claim 1 wherein casing comprises opposed generally planar face walls extending to the curved wall intermediate the face walls.
- 11. (Currently Amended) An electrochemical cell, which comprises:
 - a) a casing comprising opposed generally planar face walls extending to a curved wall intermediate the face walls and extending to an opening closed by a lid;
 - b) an anode a negative electrode comprising a plurality of anode face portions joined by anode connecting portions, wherein the anode face portions comprise an anode current collector supporting lithium and at least one of the anode connecting portions support a negative electrode active material of an alkalimetal;
 - c) a cathode positive electrode comprising a plurality of cathode face portions joined by cathode connecting portions, wherein the cathode face portions and at least one of the cathode connecting portions support comprise a cathode current collector supporting a cathode active material which intercalates with lithium the alkali metal, and wherein the negative electrode and positive electrode are electrode assembly in the casing with the anode and cathode face portions aligned generally parallel to the opposed face walls while a periphery of the anode and cathode face portions substantially follows a contour of the curved wall of the casing;

- d) a separator disposed between the anode negative electrode and the cathode as an electrode assembly housed in the casing with the anode and cathode portions aligned generally parallel to the opposed casing face walls while a periphery of the anode and cathode portions substantially following a contour of the curved wall of the casing positive electrode; and
- e) an electrolyte solution activating the electrode assembly; negative and positive electrodes
- f) wherein the cell is either in:
 - a case-negative design with a first cathode i) portion disposed intermediate first and second anode portions and wherein a combined capacity of a first and second anode faces of the respective first and second anode portions facing opposite sides of the first cathode portion is greater than a capacity of the first cathode portion, or
 - ii) a case-positive design with a first anode portion disposed intermediate first and second cathode portions and wherein a combined capacity of a first and second cathode faces of the respective first and second cathode portions facing opposite sides of the first anode portion is greater than a capacity of the first anode portion.

- (Currently Amended) The electrochemical cell of claim 11 wherein the largest negative and positive face portions are disposed in the center of the electrode assembly and the other negative and positive face portions disposed on opposite sides of the largest <u>negative</u> and positive face portions become gradually smaller as the distance from the largest negative and positive face portions increases.
- (Currently Amended) A method of assembling a cell-stack for providing an electrochemical cell, comprising the steps of:
 - a) providing a casing comprising opposed generally planar face walls extending to a curved wall intermediate the face walls:
 - b) providing an anode a negative electrode comprising a plurality of anode face portions joined by anode connecting portions, wherein the anode face portions comprise an anode current collector supporting lithium and at least one of the anode connecting portions support a negative electrode active-material of an alkali metal;
 - C) providing a cathode positive electrode comprising a plurality of cathode face portions joined by cathode connecting portions, wherein the cathode face portions and at least one of the cathode connecting portions support comprise a cathode current collector supporting a cathode active material which is intercalatable with lithium the alkali metal;
 - d) placing the anode negative electrode and the cathode positive electrode adjacent to one another such that the anode face portions and the anode connecting

9 - 37505.0206

- portions are aligned with the cathode face portions and the cathode connecting portions;
- e) providing a separator disposed between the <u>anode</u>

 negative electrode and the <u>cathode</u> positive

 electrode;
- f) winding a first set of the anode and cathode face portions on top of a second set of the anode and cathode face portions to provide an electrode assembly having the negative electrode and positive electrode electrochemically associated with each other;
- g) housing the electrode assembly in the casing such that a periphery of the anode and cathode face portions substantially follows a contour of the curved wall of the casing; and
- h) including providing the cell having either:
 - i) a first cathode portion disposed intermediate first and second anode portions and wherein a combined capacity of a first and second anode faces of the respective first and second anode portions facing opposite sides of the first cathode portion is greater than a capacity of the first cathode portion, or
 - ii) a first anode portion disposed intermediate
 first and second cathode portions and wherein a
 combined capacity of a first and second cathode
 faces of the respective first and second cathode
 portions facing opposite sides of the first
 anode portion is greater than a capacity of the
 first anode portion; and

- g) closing the open end of the casing with a lid and activating the electrode assembly with an electrolyte.
- 14. (Currently Amended) The method of claim 13 wherein the anode and cathode electrodes are unitary members.
- 15. (Withdrawn and Previously Presented) The method of claim 13 wherein one of the anode and the cathode electrodes is provided in two sections and the other electrode is a unitary member and a first one of the sections is aligned with a first side of the other electrode and a second one of the sections is aligned with a second side of the other electrode before the electrodes are wound to provide the electrode assembly.
- 16. (Currently Amended) The method of claim 13 including providing one more anode face portion than cathode face portion and providing the electrode assembly begins by winding the one anode face portion on top of a cathode face portion.
- 17. (Withdrawn) The method of claim 13 including providing an equal number of cathode face portions and anode face portions and the cell is in either a case-positive or a case-negative design.
- 18. (Currently Amended) The method of claim 13 including increasing the anode and cathode connecting portions in length from a first end of the respective electrode assembly anode and eathode electrodes to an opposite end thereof.

- 19. (New) The cell of claim 1 wherein the cell is in a case-negative design having the first cathode portion disposed intermediate the first and second anode portions.
- 20. (New) The cell of claim 1 wherein the cell is in a case-positive design having the first anode portion disposed intermediate the first and second cathode portions.
- 21. (New) The method of claim 13 including providing the cell in a case-negative design by positioning the first cathode portion intermediate the first and second anode portions.
- 22. (New) The method of claim 13 including providing the cell in a case-positive design by positioning the first anode portion intermediate the first and second cathode portions.